PIMENOV, V.S.; KOTLYAR, Ya.M., redaktor; RYSHKOVSKIY, N.N., tekhredaktor.

[Aircraft engine] Aviatsionnyi dvigatel'. Moskva, Izd-vo Dosaaf, 1951. 82 p. (MLRA 8:5)

(Airplanes--Engines)

BOYKOV, B.V.; KOTLYAR, Ya.M., redaktor; GRIGOR'YEVA, A.I., vedushchiy redaktor; ZHURAVLEV, A.S., tekhnicheskiy redaktor

[Airplane engines] Aviatsionnye dvigateli. Moskva, Izd-vo DOSAAF, 1954. 175 p. [Microfilm] (MLRA 7:9)
(Airplanes--Engines)

KOTLYAR, Ya M.

INOZEMTSEV, Nikolay Viktorovich; SOKOLOV, A.I., inzhener, redaktor; BOGOMOLOVA, M.F., redaktor; KOTLYAR, Ya.M., kandidat tekhnicheskikh nauk, redaktor; MASLENNIKOV, M.M., laureat Stalinskoy premii, professor, doktor tekhnicheskikh nauk, retsenzent; GLADKIKH, N.N., tekhnicheskiy redaktor.

[Gas turbine aviation engines; theory and practical operation] Aviatsionnye gazoturbinnye dvigateli; teoriia i rabochii protsess. Moskva, Gos.izd-vo obor. promysh., 1955. 352 p. (MLRA 9:1)
(Airplanes--Turbojet engines)

ARZHANIKOV, Nikolay Sergeyevich; MAL'TSEV, Vladimir Nikolayevich; BURAGO, G.F., doktor tekhnicheskikh nauk, professor, retsenzent; VOTYAKOV, V.D., kandidat tekhnicheskikh nauk, dotsent, retsenzent; SHUMYATSKIY, B.Ya., kandidat tekhnicheskikh nauk, retsenzent; KOTLYAR, Ya.M., kandidat tekhnicheskikh nauk, redaktor; PETROVA, I.A., izdatel'skiy redaktor; GLADKIKH, N.N., tekhnicheskikh redaktor

[Aerodynamics] Aerodinamika. Izd. 2-oe. Moskva, Gos. izd-vo obor. promyshl., 1956. 483 p. (MLRA 9:11)
(Aerodynamics)

KOTLYAR, YA. M.

AUTHOR: Kotlyar, Ya. M. (Moscow) 24-10-2/26

TITLE: Flow of a viscous gas in a slot between two co-axial cylinders. (Techeniye vyazkogo gaza v zazore mezhdu dvumya koaksial'nymi tsilindrami).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.10, pp. 12-18 (USSR)

ABSTRACT: The three-dimensional flow is considered of a compressed viscous gas in the gap between two co-axial circular cylinders, assuming the gap very small compared to the linear dimensions of the cylinders and also that the gas is fed from a container under constant pressure through small inflow holes which are uniformly distributed about the circles located at the lateral surface of the external cylinder, the planes of which are perpendicular to the general axis of the cylinders. The outflow of the gas is through two outflow openings distributed in the centres of the bottom and top faces of the external cylinder. In the gas motion equations, the terms relating to inertia are disregarded as compared to the terms relating to viscosity. Only those main viscosity terms of the motion equations are conserved, the order of which is much higher than of the others; owing to the assumed small size of the gaps

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Flow of a viscous gas in a slot between two co-axial cylinders.

between the cylinders, such main terms will be those for which the second derivatives are perpendicular either to the generatrices of the cylinders or to their faces. Again, in view of the small size of the gaps, it is further assumed that the pressure across the gap is constant. The main assumptions indicate that the problem under consideration is solved according to the known Reynolds formulation. Only the barotropic movement of the gas is considered for which the relation between the specific gravity of the gas γ and the pressure p is expressed by a function of the type $\gamma = f(p)$ which is assumed known and it is also assumed that the changes in the viscosity coefficient μ are insignificant. Taking into consideration that the radius of the cylinders is much larger than the size of the lateral gap H, the flow of the gas in the lateral gap is not solved directly on the cylinders but on the development of the cylinder in a plane, i.e. investigation of the gas flow in the lateral gap is substituted by investigating the gas flow between two parallel plates with a constant gap. This corresponds to such a selection of the coordinate system at which the origin is placed at a point of the lateral surface of the cylinder; the x-axis is the directional of the

Card 2/3

AUTHOR: Kotlyar, Ya. M. (Moscow)

TITLE: Some Examples of Motion of a Viscous Gas in a Narrow Gap of Variable Thickness (Nekotoryye primery dvizheniya vyazkogo gaza v uzkom zazore peremennoy tolshchiny)

SOV/24-58-5-6/31

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 5, pp 34-39 (USSR)

ABSTRACT: The gap through which the gas is flowing is formed by a plane at z=0 (Fig.1) and a surface given by h=h(x,y). It is well known that for barotropic gas motion through a narrow gap in the case of small Reynolds numbers and small temperature changes (so that the viscosity is approximately constant) the pressure function

$$P = \int \gamma(p)\, dp$$

satisfies the Reynolds equation (1.1)

$$\frac{\partial}{\partial x}\left(h^3 \frac{\partial P}{\partial x}\right) + \frac{\partial}{\partial y}\left(h^3 \frac{\partial P}{\partial y}\right) = 0 \qquad (1.2)$$

where γ is the specific weight of the gas, $p=p(x,y)$ is the pressure.

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When h is constant Eq.(1.2) becomes identical with the Laplace equation whose solutions under specific boundary conditions are well known. It is known that if $h^{3/2}$ is a harmonic function, then Eq.(1.2) reduces to the Laplace equation

$$\Delta u = 0, \quad u = h^{3/2} p \tag{1.3}$$

and this case is considered in the present paper. The harmonic function u may be looked upon as the real part of a certain complex potential $W(\zeta) = u(x,y) + iv(x,y)$. In the presence of sources (or sinks) in the current, placed at points given by $\zeta_i = x_i + iy_i$, the complex potential W is of the form

$$W(\zeta) = \alpha_o \ln (\zeta - \zeta_i) + f(\zeta) \tag{1.4}$$

where $f(\zeta)$ is a regular function in the region of flow and is determined by the boundary conditions, and the constant α_o is associated with the output of gas G at

Some Examples of Motion of a Viscous Gas in a Narrow Gap of Variable Thickness

the source (sink). In order to find the relation between α_0 and G the case is considered where the gas flows through a circular cylinder of radius r so that in polar co-ordinates

$$G = \int_0^{2\pi} \int_0^h \gamma v_r r d\Theta dz, \quad v_r = \frac{1}{2\mu} \frac{\partial p}{\partial r} z (z - h)$$

and

$$G = - \frac{r}{12\mu} \int_0^{2\pi} h^3 \frac{\partial P}{\partial r} d\Theta \qquad (1.5)$$

so that substituting for P we have

$$G = \frac{r}{12\mu} \int_0^{2\pi} \left(\frac{\partial h^{3/2}}{\partial r} u - h^{3/2} \frac{\partial u}{\partial r} \right) d\Theta \qquad (1.6)$$

Card 3/5 The functions u may be expanded into a series in the

Some Examples of Motion of a Viscous Gas in a Narrow Gap of Variable Thickness

neighbourhood of the source so that

$$u = \alpha_o \ln r + a_o + \sum_{k=1}^{\infty} r^k (a_k \cos \Theta + b_k \sin k\Theta) \quad (1.7)$$

$$h^{3/2} = c_o + \sum_{k=1}^{\infty} r^k (c_k \cos \Theta + d_k \sin k\Theta) \quad (1.8)$$

Using (1.7 to 1.8) the integral (1.6) may be evaluated and is found to be equal to $- 2\pi\alpha_o c_o/r$ so that

$$G = - \frac{\pi\alpha_o c_o}{6\mu} \quad (1.9)$$

and since $c_o = h^{3/2} (x_i, y_i)$ one finds that

$$\alpha_o = - \frac{6\mu G}{\pi} h^{-3/2} (x_i, y_i) \quad (1.10)$$

Card 4/5 This formalism is applied to the following special cases:

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Some Examples of Motion of a Viscous Gas in a Narrow Gap of Variable Thickness

1. Source on a ring between two planes.
2. Source on a band between two planes.
3. A chain of sources on a strip of a special form.

Analytical expressions are derived for these three cases. There are 4 figures and 5 references, all of which are Soviet.

ASSOCIATION: Moskovskiy aviatsionnyy institut
(Moscow Aviation Institute)

SUBMITTED: January 13, 1958

Card 5/5

S /179/59/000/06/004/029
E191/E181

AUTHOR: Kotlyar, Ya.M. (Moscow)

TITLE: Contribution to the Theory of Spherical Type Air Bearings

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 6, pp 21-26 (USSR)

ABSTRACT: An approximation method is used to solve the Reynolds equation of the hydrodynamic theory of lubrication, which permits taking into account pressure variations both in zenith and azimuth. The Reynolds equation is set up in spherical coordinates and applied to the clearance between a floating solid and a hollow sphere which is slightly eccentric in relation to the hollow sphere in the direction of the bearing pressure. The case in which the fluid is supplied through a single central hole, so that the pressure distribution is symmetrical (independent of azimuth) can be easily solved and has previously been fully treated. The more general case when the fluid is supplied through several holes not directly underneath the floating solid sphere has also been previously treated by the small parameter method ('Hydrodynamic Theory of the Spherical Bearing' by Loytsyanskiy L.G. and

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S/179/[illegible]/000/06/004/029
E191/E181

Contribution to the Theory of Spherical Type Air Bearings

Stepanyants L.G., Trudy Leningrad Politekh. Institute Nr 198, 1958). In the present contribution, the exact function expressing the variation of the clearance thickness is replaced by a substitute function so constructed that the Reynolds equation has a general solution in the form of an arbitrary harmonic function, namely a substitution which converts the Reynolds equation into a Laplace equation (in spherical coordinates). When the substitution is so fitted that the true and the substitute clearances coincide in thickness at zenith angles of zero, 50° and 90°, the differences are thought to be negligible. By this method, the pressure distribution is found throughout the clearance and several special cases can be considered, such as a clearance of constant thickness and the supply of air to a single central hole. The throughflow of air is related to the parameters of the bearing so that when the throughflow is known the pressure field in the bearings can be found. If the throughflow is not known, it can be determined, together with the pressure field, from the pressure in the chamber from which the bearing

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S/179/59/000/06/009/029
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Contribution to the Theory of Spherical Type Air Bearings

is supplied. The pressure field permits the evaluation of the carrying force. Clearly, the method of solution is also applicable relatively easily to a bearing with several rings of small air feeding holes. A comparison of the approximation adopted with the exact method in the case of a central feeding hole for the same air flow (assuming isothermal motion of the air) shows satisfactory agreement.
There are 4 figures and 5 Soviet references.

Card 3/3

ASSOCIATION: Moskovskiy aviatsionnyy institut
(Moscow Aviation Institute)

SUBMITTED: May 4, 1959

10(2) SOV/20-127-1-15/65

AUTHOR: Kotlyar, Ya. M.

TITLE: One Possibility of Obtaining in a Closed Form the Exact Integrals of the Equation of Reynolds (Ob odnoy vozmozhnosti polucheniya v zamknutoy forme tochnykh integralov uravneniya Reynol'dsa)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 1, pp 59-62 (USSR)

ABSTRACT: In the case of slow steady barotropic motions of a viscous gas in the narrow space h between the plane Oxy and the cylinder surface $h = h(x)$, gas pressure is determined by means of the Reynolds equation

$$\frac{\partial}{\partial x}\left(h^3 \frac{\partial P}{\partial x}\right) + \frac{\partial}{\partial y}\left(h^3 \frac{\partial P}{\partial y}\right).$$

The function $P(x,y)$ is connected with the pressure p by means of the specific weight γ by the relation $P = \int \gamma(p)dp$. Dynamic viscosity during the motion is assumed to vary only little ($\mu \sim$ const). The above equation formally corresponds to the equation for the flow function of the plane eddy-less subsonic flow of a perfect gas

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One Possibility of Obtaining in a Closed Form the Exact Integrals of the Equation of Reynolds

$\frac{\partial}{\partial s}\left(\sqrt{K}\frac{\partial \psi}{\partial s}\right) + \frac{\partial}{\partial \theta}\left(\sqrt{K}\frac{\partial \psi}{\partial \theta}\right) = 0$. Here $K = K(s)$ denotes the Chaplygin-function, s - a certain function of the velocity modulus, θ - the angle characterizing the direction of the velocity vector. It is therefore possible to use certain methods for integration, which were developed in the theory of the plane motions of a perfect gas. According to L. I. Sedov (Ref 3) one of the possible methods of solving the boundary problems for the equation just written down consists in determining the connection between this and a more simple equation (e.g. the Laplace equation), for which the boundary problem concerned may be solved in an effective (especially in a closed) form. Such a connection can be established only at certain values of the coefficient K(s). The exact solution of the last equation written down with an approximating (theoretical) coefficient $K_m(s)$ may be considered to be the approximated solution of this equation with a given coefficient K(s). Short reference is made to further solution methods. For the hydrodynamical theory, the case is of special

One Possibility of Obtaining in a Closed Form the Exact Integrals of the Equation of Reynolds

interest in which the Reynolds equation written down at the beginning of this abstract contains the periodic coefficient $h = \delta(1 - \varepsilon \cos x)$, where δ and ε are constants; herefrom there results the problem of determining such an approximated coefficient of the Reynolds equation, in the case of which the solution of the problem is reduced to solving the Laplace equation. The author therefore confines himself to giving the final result, the validity of which may easily be checked by substitution: If the periodic coefficient of the initially written down Reynolds equation has the form $h_T = 2\delta^*(1 + 3\mathrm{ctg}^2(x/2))^{-3/2}$ (where δ^* is an arbitrary constant), the general solution of this Reynolds equation is expressed by an arbitrary harmonic function Φ as follows:

$$P = \Phi - \frac{3 \cos \frac{x}{2} \cos x}{2 \sin^3 \frac{x}{2}} \frac{\partial \Phi}{\partial x} + \frac{2 + \cos x}{\sin^2 \frac{x}{2}} \frac{\partial^2 \Phi}{\partial x^2} .$$

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One Possibility of Obtaining in a Closed Form the Exact Integrals of the Equation of Reynolds

Finally, the determination of the harmonic function Φ is discussed. There are 2 figures and 7 Soviet references.

ASSOCIATION: Moskovskiy aviatsionnyy institut im. Sergo Ordzhonikidze (Moscow Aviation Institute imeni Sergo Ordzhonikidze)

PRESENTED: March 25, 1959, by L. I. Sedov, Academician

SUBMITTED: March 5, 1959

Card 4/4

KOTLYAR, L.M.

New solar magnetograph at the Main Astronomical Observatory of the Academy of Sciences of the U.S.S.R. Astron.tsir. no.203: 5-7 Je '59. (MIRA 13:4)

1. Glavnaya astronomicheskaya observatoriya AN SSSR, Pulkovo.
(Astronomical instruments)

VOSTRIKOV, S.I.; ZUYEV, L.M.; KUZNETSOV, V.I.; MAKHNUTIN, M.A.; MESPELA, A.N.; PELISHENKO, V.A.; TOKMAKOV, A.K.; FILIN, A.M.; MAYZEL', Yu.M., kand.tekhn.nauk, retsenzent; KOTLYAR, I.V., kand.tekhn.nauk, red.; PISAREV, M.S., inzh.-polkovnik zapasa, red.; MYASNIKOVA, T.F., tekhn.red.

[Theory of airplane engines] Teoriia aviatsionnykh dvigatelei. Pod red. I.V.Kotliara. Moskva, Voen.izd-vo M-va obor.SSSR. Pt.2. [Theory of jet engines] Teoriia reaktivnykh dvigatelei. 1960. 281 p. (MIRA 13:7)
(Airplanes--Jet propulsion)

KOTLYAR, Ya. M. (Moscow)

"On the Motion of Liquids and Gases in the Gap of a Cylindrical or Spherical Bearing."

report presented at the First All-Union Congress on Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb 1960.

YERMOLAYEV, V.L.; KOTLYAR, I.P.; SVITASHEV, K.K.

Internal conversion from the fluorescent to the phosphorescent level in naphthalene derivatives. Izv.AN SSSR.Ser.fiz. 24 no.5:492-495 My '60. (MIRA 13:5)
(Naphthalene--Optical properties) (Luminescence)

10.4000

~~10 (2)~~

AUTHOR: Kotlyar, Ya. M.

67937
SOV/20-130-1-10/69

TITLE: On the Approximation of Reynolds' Equation

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 1, pp 41 - 44 (USSR)

ABSTRACT: The solution of various hydrodynamic problems leads to the equation $\frac{\partial}{\partial x}\left(Q^2 \frac{\partial P}{\partial x}\right) + \frac{\partial}{\partial y}\left(Q^2 \frac{\partial P}{\partial y}\right) = 0$, where $P=P(x,y)$ denotes the desired function, Q - the given function (frequently only of one variable $Q = Q(x)$). One of the methods for solving the boundary problems of this equation consists in the approximation of the coefficient $Q(x)$ by such functions for which the solution of the above equation can be expressed by the solution of a simpler equation whose boundary problem can be solved in an effective manner. Since the method described here for the determination of these approximations is suited also for hyperbolic equations, the equation $Q\Delta P + 2Q'P_x = 0$, $\Delta = P_{xx} + P_{yy}$ is here investigated. If the latter is elliptical it is identical with the above equation. The author then investigates a sequence of equations $Q_k \Delta P_k + 2Q_k'(P_k)_x = 0$, $k = 0,1,2,\ldots$ which differ by their

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On the Approximation of Reynolds' Equation SOV/20-130-1-10/69

The author then gives a second theorem: If the coefficient of the initially written equation $Q_{k-1} = D_{k_o} D_{k-1}^{-1}$, $k = 2,3,\ldots$, the general solution of this equation is expressed by the general solution of a certain equation $A\bar{\Phi} = f_o\bar{\Phi}$ by means of the recurrence formula given here: $P_{k-1} = P_{k-2} + Q_{k-2}Q_{k-1}^{-1}(P_{k-2})_x$, $k = 3,4,\ldots$, where $P_1 = Q_1^{-1}(A_1\bar{\Phi} + \bar{\Phi}_x)$, $A_1 = -(\ln w_1)'$. D_k denotes Wronski's determinant composed of the functions $w_1, w_2, \ldots, w_k$. In conclusion, two examples are discussed. There are 10 references, 9 of which are Soviet.

ASSOCIATION: Moskovskiy aviatsionnyy institut im. Sergo Ordzhonikidze (Moscow Institute of Aviation imeni Sergo Ordzhonikidze)

PRESENTED: August 19, 1959, by L. I. Sedov, Academician

SUBMITTED: June 2, 1959

Card 3/3

OSTOSLAVSKIY, Ivan Vasil'yevich; STRAZHEVA, Irina Viktorovna; KURSHEV, N.V., prof., retsenzent; TKACHENKO, Ya.Ye., prof., retsenzent; KOTLYAR, Ya.M., dots., red.; KURSHEV, N.V., prof., retsenzent; TKACHENKO, Ya.Ye., prof., retsenzent; KOTLYAR, Ya.M., dots., red.; BOGOMOLOVA, M.F., red.izd-va; ORESHKINA, V.I., tekhn.red.

[Flight dynamics. Aircraft trajectories] Dinamika poleta. Traektorii letatel'nykh apparatov. Moskva, Oborongiz, 1963. 430 p. (MIRA 17:1)

OSTOSLAVSKIY, Ivan Vasil'yevich; STRAZHEVA, Irina Viktorovna; KURSHEV, N.V., prof., retsenzent; TKACHENKO, Ya.Ye., prof., retsenzent; KOTLYAR, Ya.M., dots., red.; KURSHEV, N.V., prof., retsenzent; TKACHENKO, Ya.Ye., prof., retsenzent; KOTLYAR, Ya.M., dots., red.; BOGOMOLOVA, M.F., red.izd-va; ORESHKINA, V.I., tekhn.red.

[Flight dynamics. Aircraft trajectories] Dinamika poleta. Traektorii letatel'nykh apparatov. Moskva, Oborongiz, 1963. 430 p. (MIRA 17:1)

KRASNOV, Nikolay Fedorovich; ARZHANIKOV, N.S., prof., retsenzent; KOTLYAR, Ya.M., dots., red.

[Aerodynamics of bodies of revolution] Aerodinamika tel vrashcheniia. Izd.2., perer. i dop. Moskva, Mashinostroenie, 1964. 572 p. (MIRA 17:10)

OSTOSLAVSKIY, Ivan Vasil'yevich; STRAZHEVA, Irina Viktorovna; SHUL'GIN, N.V., prof., retsenzent; TKACHENKO, Ya.Ye., prof., retsenzent; KOTLYAR, Ya.M., dots., red.

[Flight dynamics; stability and controllability of aircraft] Dinamika poleta; ustoichivost' i upravliaemost' letatel'nykh apparatov. Moskva, Mashinostroenie, 1965. 467 p. (MIRA 18:11)

KOTLYAR, Ye.D., kandidat meditsinskikh nauk.

"Regenerator" therapy of trigeminal neuralgia. Stomatologiia no.1:46-48 Ja-F '54. (MLRA 7:1)

1. Iz Moskovskogo gorodskogo gospitalya dlya invalidov Otechestvennoy voyny (nachal'nik A.A.Kovner, nauchnyy rukovoditel' - professor A.Ye.Verlotskiy). (Neuralgia, Facial)

KOTLYAR, Ye.D.

Neurogenic affections of the tongue. Stomatologiia no.4:64 Jl-Ag '55.
(MLRA 8:10)

1. Iz Moskovskogo gorodskogo gospitalya No.1(Nach.-podpolkovnik meditsinskioy sluzhby A.A.Kovner) dlya invalidov Otechestvennoy voyny.
(TONGUE--DISEASES)

KOTLIAR
KETLIAR, E. F.

Author: Russia (1923 - USSR) Construction Ministry on Enterprises in Heavy Industry.

Title: Technical Control. Instructions on the manufacutring of riveted steel constructions (Editor: E. F. Kotliar).
(Instruktsiia po izgotovleniiu klepanykh stal'nykh konstruksii)

City: Moscow

Publisher: State Publishing House of Construction Literature

Date: 1946 37 pp

Available: Library of Congress

Source: Monthly List of Russian Accessions, Vol. 2, Feb., 1950, p. 685.

KOTLYAR, Ye. K., kandidat tekhnicheskikh nauk.

Assembly joints of precast reinforced concrete elements in one-story industrial buildings. Opyt stroi. no.7:61-68 '56. (MLRA 10:4)

(Girders) (Columns, Concrete)

KOTLYAR, Ye.F., kandidat tekhnicheskikh nauk, nauchnyy redaktor; UDOD, V.Ya., redaktor izdatel'stva; STEPANOVA, E.S., tekhnicheskiy redaktor.

[Causes of damage to building structures] Prichiny povrezhdenii stroitel'nykh konstruktsii. Moskva, Gos.izd-vo lit-ry po stroit. i arkhit., 1957. 58 p. (MLRA 10:6)

1.Akademiya stroitel'stva i arkhitektury SSSR, Moscow. TSentral'nyy institut nauchnoy informatsii po stroitel'stvu i arkhitekture.
(Building--Repair and reconstruction)

KOTLYAR, YE. F.

137-58-5-9518

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 101 (USSR)

AUTHOR: Kotlyar, Ye. F.

TITLE: New Steel Shapes and the Use of Low-alloy Steel for Structural Purposes (a Survey) [Novyye stal'nyye profili i nizkolegirovannaya stal' v stroitel'stve (Obzor)]

PERIODICAL: V sb.: Opyt str-va. Nr 8. Moscow, Gos. izd-vo lit. po str-vu i arkhitekt., 1957, pp 96-118

ABSTRACT: In an effort to develop shapes (S) having higher resisting moments for a given weight, new standards for I-beams (GOST 8239-56), channels (GOST 8240-56), window and skylight casements (GOST 7511-55), and bent shapes (GOST 8275-57 & 8283-57) have been designed and approved. This will result in a relative saving of 5-15 percent of metal when the new beams, channels, and various casements are used, and of 3-4 percent in the case of thin-flanged angles. In addition, bent S of any desired form can be made on bending rolls. The metal constituting these S is distributed rationally throughout the cross section of the article, thus affording a maximum saving of steel. With a total requirement of ~500,000 tons of bent S for all branches of industry in the USSR, ~150,000 tons may be saved. 1. Beams--Design 2. Beams--Production 3. Steel--Applications

Card 1/1 M. Z.

KOTLYAR, Ye. F.

KOTLYAR, Ye.F., kand. tekh. nauk.

NL2 low-alloy steel structural components welded at the Dnepropetrovsk Steelworks. Mekh. stroi. tekh. 14 no.8:10-15 Ag '57. (MIRA 10:11)

1. TSentral'nyy nauchno-issledovatel'skiy institut stroitel'stva Akademii stroitel'stva i arkhitektury SSSR.
(Steel, Structural)

KOTLYAR, Ye.F., kand. tekhn. nauk, starshiy nauchnyy sotrudnik; GUROV, Yu.S., red. izd-va; STEPANOVA, E.S., tekhn. red.

[Structural aluminum in foreign countries] Aliuminii v stroitel'stve za rubezhom. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1958. 70 p. (MIRA 11:8)

1. Akademiya stroitel'stva i arkhitektury SSSR.
(Aluminum, Structural)

KOTLYAR, Ye.F., kand. tekhn. nauk

Bridge spans made of aluminum alloys. Transp. stroi. 8 no. 6:23-26 Je '58. (MIRA 11:7)

(Aluminum, Structural)
(Bridge construction)

KOTLYAR, Ye.F., kand. tekhn. nauk.

Construction elements made of aluminum alloys abroad. Biul. stroi. tekh. 15 no.3:41-44 Mr '58. (MIRA 11:3)

1. TSentral'nyy nauchno-issledovatel'skiy institut stroitel'stva Akademii stroitel'stva i arkhitektury SSSR.
(Aluminum alloys) (Aluminum, Structural)

KOTLYAR, Ye.F., kand.tekhn.nauk

Standard sectional and solid steel web beams with 6 and 12 m span-length for electric bridge cranes with lifting capacity of 5 to 75 tons. Buil.stroi.tekh. 15 no.11:47-54 N '58. (MIRA 11:12)

1. TSentral'nyy nauchno-issledovatel'skiy institut stroitel'stva Akademii stroitel'stva i arkhitektury AN SSSR.
(Cranes, derricks, etc.)

KOTLYAR, Ye.F., kand. tekhn. nauk; YEGOROVA, N.O., red. izd-va; ABRAMOVA, V.M., tekhn. red.

[Aluminum construction in foreign countries] Stroitel'nye konstruktsii iz aliuminievykh splavov za rubezhom. Moskva, Gos. izd-vo lit-ry po stroit. arkhit. i stroit. materialam, 1960. 134 p. (MIRA 15:4)

(Aluminum, Structural)

KOTLYAR, Ye.F., kand.tekhn.nauk

Steel construction elements of the main building of the steel smelting shop of the Rourkela Metallurgical Plant. Prom.stroi. 38 no.4:58-61 '60. (MIRA 13:8)
(Rourkela, India--Building, Iron and steel)

KOTLYAR, Ye.F., kand.tekhn.nauk

Using aluminum alloys in manufacturing hoisting conveyers and excavators. Vest.mash. 40 no.9:75-78 S '60.
(MIRA 13:9)

(Conveying machinery) (Excavating machinery)
(Aluminum alloys)

KOTLYAR, Ye.F., kand.tekhn.nauk

Steel elements for atomic reactor buildings. Mont.i spets. rab.v stroi. 23 no.6:30-31 Je '61. (MIRA 14:7)
(Steel, Structural) (Atomic power-plant)

KOTLYAR, Ye.F., kand.tekhn.nauk

The steel elements of reflector antennas. Mont. i spets. rab. v stroi. 23 no.9:29-30 S '61. (MIRA 14:9)
(Antennas (Electronics))

KOTLYAR, Ye.F., kand.tekhn.nauk

Gasholder with a capacity of 200,000 m^3 with a prestressed concrete tank. Mont. i spets. rab. v stroi. 24 no.7:30-31 Jl '62. (MIRA 15:6)

(Berlin, West--Gasholders)

KOTLYAR, Ye.F., kand.tekhn.nauk

Aluminum reservoirs for storing and transporting compressed gas.
Prom.stroi. 41 no.3:47-48 Mr '64. (MIRA 17:3)

KOTLYAR, Ye.F., kand.tekhn.nauk

Present-day steels for structural elements in the United States.
Prom.stroi. 42 no.2:45-47 '65.

(MIRA 18:4)

KOTLYAR, Ye Ye

AUTHORS: Kosolapova, T. Ya., Kotlyar, Ye. Ye. 79-3-5-3 /39

TITLE: The Resistance to Acid of Some Molybdenum Silicides (Kislotoustoychivost' nekotorykh silitsidov molibdena)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol 3, Nr 5, pp 1241-1244 (USSR)

ABSTRACT: The chemical properties of some molybdenum silicides, especially the resistance to acid of the silicides $MoSi_2$ and Mo_5Si_2 and of the tricomponent phase Mo_4CSi_3, were investigated. The method of production of the silicides from molybdenum and silicon was described. The behavior of the produced silicides with respect to HF and H_3PO_4, H_2SO_4 + H_3PO_4 in various concentrations, HNO_3 + HF in different ratios, oxalic acid + H_2O_2, oxalic acid + H_2O_2 + H_2SO_4, was investigated. The obtained results showed that the molybdenum silicide is stable in all above-mentioned mixtures, except in a mixture consisting of 4 parts H_3PO_4, 1 part H_2SO_4 and 2 parts H_2O.

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78-3-5-32/39

The Resistance to Acid of Some Molybdenum Silicides

Molybdenum silicide dissolves spontaneously in a mixture of 15 ml and 2 ml HNO_3 . Mo_3Si_2 is not as stable with respect to acids as $MoSi_2$, which is not soluble in sulfuric acid, hydrochloric acid and HF. It decomposes in nitric acid, aqua regia as well as in a mixture of oxalic acid + H_2O_2. A mixture of 4 parts H_3PO_4 + 1 part H_2SO_4 + 2 parts H_2O does not decompose at room temperature. Complete decomposition takes place at the boiling point. The ternary phase Mo_4Si_3C is analogous to Mo_3Si_2 . According to their stability, all three silicides must be classified as follows with respect to acids and oxidizing agents: $MoSi_2$ - Mo_4CSi_3 - Mo_3Si_2. There are 3 tables and 3 references, none of which are Soviet.

SUBMITTED: May 6, 1957

AVAILABLE: Library of Congress

Card 2/2

1. Molybdenum silicides--Chemical properties

·5(2) ·

AUTHORS: Kosolapova, T. Ya., Kotlyar, Ye. Ye. 30V/32-24-12-9/45

TITLE: More Rapid Method for Complete Analysis of Silicon Carbides (Uskorennyy metod polnogo analiza karbida kremniya)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 12, pp 1442-1443 (USSR)

ABSTRACT: Analytical methods are described in the publications for the analysis of technical carborundum (Refs 1,2,3) and fire-resistant carborundum articles (Refs 4,5). The present, more rapid method is provided for the determination of free carbon and silicon, as well as for silicon carbide and the iron in silicon carbide. The free carbon determination is carried out on the glowing of the sample after it has been in a muffle furnace at 850° for 20-40 minutes; this involves determining the loss in weight in the carbon content. The residue on ignition is treated with a saltpeter-flux-sulfuric acid mixture, allowed to evaporate to dryness, and then ignited again at 800-850° to constant weight. The loss in weight is now indicated by the sum $Si_{free} + SiO_2$. To avoid the presence of iron the residue is treated with hydrochloric acid, and the insoluble material is then weighed as SiC. The experimental results obtained are compared with data obtained using the method of Miklashevskiy

Card 1/2

More Rapid Method for Complete Analysis of Silicon Carbides 30V/32-24-12-9/45

(Refs 1,3) (Table 3). The analytical procedure is given, and the time required for analysis is 6-8 hours.- There are 3 tables and 5 references, 3 of which are Soviet.

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov Akademii nauk USSR (Institute for Metalloceramics and Special Alloys of the Academy of Sciences, UkrSSR)

Card 2/2

KOTLYAR, Ye.Ye.; NAZARCHUK, T.N.

Determination of free boron in boron carbide, boran nitride, and in alloys based on them. Zhur.anal.khim. 15 no.2:207-210 Mr-Ap '60. (MIRA 13:7)

1. Institut metallokeramiki i spetsial'nykh splavov AN USSR, Kiyev.
(Boran--Analysis) (Boron carbide) (Boron nitride)

S/700/61/000/006/012/018
D267/D304

AUTHORS: Kotlyar, Ye. Ye. and Nazarchuk, T. N.

TITLE: Analysis of alloys of titanium carbide with various metals

SOURCE: Akademiya nauk Ukrainskoy SSR. Institut metallokeramiki i spetsial'nykh splavov. Seminar po zharostoykim materialam. Kiyev, 1960. Trudy no. 6: Khimicheskiye svoystva i metody analiza tugoplavkikh soyedineniy. Kiyev, Izd-vo AS UkrSSR, 1961, 93-100

TEXT: Methods of analyzing the alloys I. (TiC + Nb) and II. (TiC + V) are described. 1) To check the previously developed methods of separating Ti from Nb, standard solutions were prepared with H_2SO_4, using Al as the reducing agent. It was found that to prevent the reduction of Nb by Al metal in H_2SO_4/HCl solutions, large proportions of fluorides are required, whereas the required amount of fluorides is much smaller in sulfate solutions (without HCl). Other

Card 1/4

complex-forming agents can also be used, in whose presence Ti^{4+} is easily reduced to Ti^{3+}, whereas Nb^{5+} is not. The following method is suggested for determining Ti in the TiC-Nb alloy: The sample is dissolved in HNO_3 + HF, the solution is evaporated to a small volume, H_2SO_4 is added and evaporation is continued until SO_3 fumes appear. The cooled solution is transferred to a conical flask, to which H_2SO_4 and solid NH_4F are added; after dilution with water, Al metal is added in small batches. The solution is then boiled under CO_2 until all Al has been dissolved; it is then cooled and titrated with iron alum. The Ti content is calculated from the formula VxTx100/d /%/, where V is the volume of the titrated iron alum solution in mg/ml, and d is the weight of sample, in g. Modifications are mentioned. II) High results were obtained for the Ti content determined by fusion with alkalis or Na_2O_2, when the V content was >30%. The authors studied in detail the possibility of separating Ti from V by precipitating with diethyldithiocarbamate in the presence of

Card 2/4

various complex-forming agents. It was found that in the presence of tartaric acid, the quantitative precipitation of V occurs at pH $\leqslant 3$, and in the presence of fluorides at pH 5.6. In the presence of oxalic acid V remains in the aqueous phase at all pH values. Further tests disclosed that the optimum separation of Ti from V is obtained at pH 3 - 4 (with tartaric acid) or at pH 5-6 (with NH_4F). The results of analyses were completely satisfactory for both complex-formers. The authors suggest the following methods: The sample is dissolved in a micture of H_2SO_4 and HNO_3, the liquid is evaporated until dense SO_3 fumes are formed, and tartaric acid is added to the cooled solution. By dropwise addition of NH_3 the pH is brought to 3-4, a $CH_3COOONH_4$ buffer solution is added and the solution is transferred into a separating funnel to which dry Na diethyldithiocarbamate is added in small portions. V diethyldithiocarbamate is extracted with $CHCl_3$. In the aqueous layer pH is checked and V is again precipitated with diethyldithiocarbamate. After

the second extraction the aqueous layer becomes colorless; it is transferred into a beaker, boiled, after which H_2SO_4 is added and Ti determined by any known method. Instead of tartaric acid it is possible to use 1 - 2 g of NH_4F at pH 5-6. V can be determined volumetrically from another sample without separating Ti, or from the $CHCl_3$ extract. There are 1 figure, 8 tables and 15 references: 10 Soviet-bloc and 5 non-Soviet-bloc. The references to the English-language publications read as follows: W. R. Scholler, 'The analytical chemistry of tantalum and niobium', London, 1937; I. H. Muller, J. Amer. Chem. Soc., 33, 1506, (1911); I. Gallan. J. Henderson, Analyst, 54, 650, (1929).

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov AN USSR (Institute of Powder Metallurgy and Special Alloys AS UkrSSR)

S/700/61/000/006/016/018
D204/D304

AUTHORS: Kotlyar, Ye. Ye. and Nazarchuk, T. N.

TITLE: Analysis of titanium-tin alloys with high Sn contents

SOURCE: Akademiya nauk Ukrainskoy SSR. Institut metallokeramiki i spetsial'nykh splavov. Seminar po zharostoykim materialam. Kiyev, 1960. Trudy no. 6: Khimicheskiye svoystva i metody analiza tugoplavkikh soyedineniy. Kiyev, Izd-vo, AN UkrSSR, 1961, 121-123

TEXT: The usual iodometric methods of analysis were found inadequate for analysis of Ti-Sn alloys with 40 - 50% Sn, and the following methods were, therefore, tried and found satisfactory: (1) To determine Sn, 0.10 - 0.15 g of the alloy were dissolved in 30 - 40 ml of 1:4 H_2SO_4 and SO_3 was evaporated off. The residue was cooled, diluted, transferred to a 500 ml conical flask, treated with 40 - 50 ml conc. HCl and with 2 g Al dust. Further 20 ml HCl were then added and the flask was stoppered with a 2-hole plug.

Card 1/3

Analysis of titanium-tin ...

The solution was then boiled till the Al dissolved and Sn was precipitated, under CO_2. After cooling, starch and KI were added and the solution was titrated with 0.05 $NKIO_3$. (2) To determine Ti, 0.1 - 0.2 g of the alloy was dissolved in 30 - 40 ml aqua regia and evaporated to dryness. The residue was dissolved in 10 ml conc. HCl, 10 ml HBr or 0.5 - 1 g NH_4Br were added and $SnBr_4$ was distilled off. After further evaporation, 10 ml 1:1 H_2SO_4 was added, SO_3 removed by heating, and the solution was cooled and diluted with 100 ml H_2O and 30 - 40 ml conc. HCl. The mixture was transferred to a 500 ml conical flask with a two-hole stopper, 3 g Al dust were added and the solution was boiled and cooled. It was then titrated with Fe ammonium alum in the presence of 10 ml 10% KCNS till a pink coloration appeared. Formulas for the calculation of results are given. There are 1 table and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc. The references to the English

Card 2/3

language publications read as follows: F. L. Okell and I. L. Zumsden, Analyst, 60, 803, (1935); L. Woods and R. Clark, Analyst, 82, 624, (1957); Y. Willadsen, V. Poulsen and G. Rund, Acta Chem. Scand., 11, 167, (1957).

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov AN USSR (Institute of Powder Metallurgy and Special Alloys AS UkrSSR)

Card 3/3

KOTLYAR, Ye.Ye.; NAZARCHUK, T.N.

Analysis of alloys of titanium carbide with various metals.
Biul. Inst. metaloker. i spets. splav. AN URSR no.6:93-100
'61. (MIRA 15:2)

1. Institut metallokeramiki i spetsial'nykh splavov AN USSR.
(Titanium carbide)

KOTLYAR, Ye.Ye.; NAZARCHUK, T.N.

Analysis of titanium-tin alloys with a high tin content. Biul. Inst. metaloker. i spets. splav. AN URSR no.6:121-123 '61. (MIRA 15:2)

1. Institut metallokeramiki i spetsial'nykh splavov AN USSR.
(Titanium-tin alloys)

KOTLYAR, Ye.Ye.; NAZARCHUK, T.N.

Determination of titanium in titanium carbide-niobium alloys.
Zhur.anal.khim. 16 no.5:631-634 S-O '61. (MIRA 14:9)

1. Institute of Metalloceramics and Special Alloys, Academy of Sciences, Ukrainian S.S.R., Kiyev.
(Titanium--Analysis) (Titanium-niobium alloys)

S/075/61/016/006/002/006
B106/B147

AUTHORS: Kotlyar, Ye. Ye., and Nazarchuk, T. N.

TITLE: Titanium determination in alloys of titanium carbide and vanadium

PERIODICAL: Zhurnal analiticheskoy khimii, v. 16, no. 6, 1961, 688-691

TEXT: Titanium and vanadium were separated by precipitating by sodium diethyl dithiocarbaminate in the presence of masking substances (tartaric acid, citric acid, oxalic acid, ammonium fluoride). Yu A. Chernikhov and B. M. Dobkina (Ref. 4: Zavodsk. laboratoriya 15, 1143 (1949)) showed that vanadium diethyl dithiocarbaminate was only stable in acid solutions. The vanadium complex can be easily extracted from acid solutions by chloroform. According to data by I. V. Pyatnitskiy (Ref. 6: Ukr. khim. zhurnal 25, 64 (1959)) vanadium is completely masked by tartaric acid at pH 7 and by citric acid at pH 4 or 5 if there is a 50-fold excess of the masking acid. Titanium is not precipitated by diethyl dithiocarbaminate at any pH-value either in the presence of tartaric acid or in the presence of citric acid. To ascertain the pH

Card 1/

value at which vanadium is quantitatively precipitated by diethyl dithiocarbaminate in the presence of the masking substances mentioned, a 20-fold amount of the respective masking substance was added to a solution of vanadium sulfate which contained 0.1-0.15 g of vanadium. The required pH value was adjusted by addition of ammonia and stabilized by a corresponding acetate ammonia buffer solution. The precipitate of vanadium diethyl dithiocarbaminate was extracted by chloroform after dry sodium diethyl dithiocarbaminate had been added. The vanadium content in the aqueous phase, was photometrically determined by means of hydrogen peroxide in the presence of sodium fluoride. The investigations showed that vanadium was quantitatively precipitated in the presence of tartaric acid at pH 3-5, in the presence of citric acid at pH 2-3, and in the presence of ammonium fluoride at pH 5-6, by sodium diethyl dithiocarbaminate. In the presence of oxalic acid, part of the vanadium remains in the aqueous phase at all pH values 3-6. On the basis of these results, the authors developed the following method for analyzing titanium carbide vanadium alloys: 25 milliliters of 1 M tartaric acid solution is added to the sulfate of the alloy (0.1-0.2 g) and a pH of 3.4 is adjusted by [illegible] aqueous ammonia. Then, 20 milliliters of an acetate [illegible] buffer solution with pH 3.4 is added. After adding small portions

Card 2/2

Titanium determination in ... S/075/61/016/006/003/[illegible]
B106/B147

of dry sodium diethyl dithiocarbaminate, the yellow-orange precipitate is extracted by chloroform. The pH value is checked in the [illegible] and 1 - 2 drops of hydrochloric acid are added if necessary. Subsequently, vanadium is again precipitated by diethyl dithiocarbaminate so that no vanadium is contained in the aqueous layer. After adding 20 milliliters of H_2SO_4 (1 : 1), titanium is determined by one of the conventional methods[4]. Instead of tartaric acid, 1-2 g of ammonium fluoride may be used. In this case, pH of the solution should be 5-6. Vanadium can either be determined from a separate weighed-in portion without separation of titanium, or titrimetrically from the chloroform extract. There are 3 tables and 6 references: 5 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: Gallan T., Henderson J., Analyst 54,650 (1959).

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR, Kiyev (Institute of Powder Metallurgy and Special Alloys AS UkrSSR, Kiyev)

SUBMITTED: June 30, 1960

Card 3/[illegible]

KOTLYAR, Ye. Ye.

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PHASE I BOOK EXPLOITATION SOV/5994

Akademiya nauk Ukrainskoy SSR. Institut metallokeramiki i spetsial'nykh splavov. Seminar po zharostoykim materialam.
Kiyev, 1960.

Trudy Seminara po zharostoykim materialam, 19-21 aprelya 1960 g. Byulleten' no. 6: Khimicheskiye svoystva i metody analiza tugoplavkikh soyedineniy (Transactions of the Seminar on Heat-Resistant Materials of the Institute of Powder Metallurgy and Special Alloys of the Academy of Sciences of the Ukrainian SSR. Held 19-21 April, 1960. Bulletin no. 6: Chemical Properties and Methods of Refractory Compound Analysis). Kiyev, Izd-vo AN UkrSSR, 1961. 124 p. 1500 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Institut metallokeramiki i spetsial'nykh splavov.

Editorial Board: I. N. Frantsevich; G. V. Samsonov, Resp. Ed.; I. M. Fedorchenko, V. N. Yeremenko, V. V. Grigor'yeva, and T. N. Nazarchuk; Tech. Ed.: A. A. Matveychuk.

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Transactions of the Seminar (Cont.) SOV/5994

PURPOSE: This collection of articles is intended for chemists, engineers, workers at scientific research institutes and plant laboratories, senior students, and aspirants at chemical and metallurgical schools of higher education.

COVERAGE: Articles of the collection present the results of studies of the chemical properties of refractory compounds (carbides, borides, nitrides, phosphorides, silicides), refractory and rare metals, and their alloys, and some original methods of analyzing these materials, which are now being utilized in the new fields of engineering. No personalities are mentioned. Each article is accompanied by references, mostly Soviet.

TABLE OF CONTENTS:

S/081/62/000/019/011/053
B144/B180

AUTHORS: Kotlyar, Ye. Ye., Nazarchuk, T. N.

TITLE: Analysis of alloys of titanium carbide with different metals

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1962, 119, abstract 19D102 (Byul. In-t metallokeram. i spets. splavov AN USSR, no. 6, 1961, 93 - 100)

TEXT: Methods are described for analyzing alloys of TiC with Nb or V. To determine Ti in TiC-Nb alloys the sample (0.1 - 0.2 g) is dissolved in 10 - 15 ml of a mixture of concentrated HNO_3 and HF, the solution is evaporated to a small volume, 10 ml H_2SO_4 is added and again evaporated till evolution of a white fume. During cooling, 20 - 25 ml concentrated H_2SO_4 and 1 - 2 g KF or 8 - 10 g citric (or tartaric) acid are added, diluted with water to 100 ml and while the solution is cooling 2.0 - 3.0 g Al powder is introduced in several batches. When the vigorous evolution of H_2 has ceased, the solution is boiled until Al is completely dissolved,

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Analysis of alloys ...

cooled in a CO_2 flow and Ti^{3+} is titrated with $NH_4Fe(SO_4)_2$ solution, using KSCN as indicator. If the alloy does not dissolve in a mixture of concentrated HNO_3 and HF, it is fused with $K_2S_2O_7$, the fusion is leached with 20 ml 35%-tartaric or citric acid, 20 ml concentrated H_2SO_4 is added and then treated as described above. Ti determination is not inhibited by a double amount of Nb. To determine Ti in TiC-V alloys, the sample (0.1 - 0.2 g) is dissolved in a mixture of 20 ml H_2SO_4 (1 : 4) and 5 ml HNO_3 (specific weight 1.43), the solution is evaporated till evolution of a white fume, 25 ml of 1 M tartaric acid is introduced into the cooled solution, a pH of 3 - 4 is established by addition of NH_4OH, and 30 ml of ammonium acetate buffer solution (pH 3 - 4) is added. The solution is passed into a separating funnel, Na diethyl dithiocarbaminate is added and a yellowish-orange precipitation of V carbaminate is extracted by chloroform. The pH of the aqueous layer is checked with a multipurpose indicator paper and the precipitation and extraction of V carbaminate are repeated. The V-free aqueous layer is boiled till clear, 20 ml H_2SO_4 (1 : 1) is

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added and Ti is determined by one of the usual methods. V is determined in the chloroform extract or from the separated weighed portion.
[Abstracter's note: Complete translation.]

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S/081/62/000/018/012/059
B144/B186

AUTHORS: Kotlyar, Ye. Ye., Nazarchuk, T. N.

TITLE: Analysis of titanium-tin alloys with high tin content

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 18, 1962, 121, abstract 18D142 (Byul. In-t metallokeram. i spets. splavov AN USSR, no. 6, 1961, 121 - 123)

TEXT: A method of determining Ti and Sn in Ti-Sn alloys was devised. To determine the Sn, 0.1 - 0.15 g of the alloy are dissolved by heating in 30 - 40 ml H_2SO_4 (1:4) and 5 - 10 ml of concentrated HNO_3 are added, whereupon the mixture is heated until it dissolves completely and is evaporated until a white fume appears. After cooling, the residue is diluted with water ($\sim$150 ml), 40 - 50 ml of concentrated HCl and 2 g of fine-grained Al (to reduce Sn) are added. After the evolution of H_2 is complete, 20 ml of concentrated HCl are added. Then the mixture is boiled in a current of CO_2 until the separated Al and Sn dissolve completely. After cooling, 10 ml of a 0.5% starch solution and 2 g of KI are added and

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S/081/62/000/018/012/059
B144/B186

Sn^{2+} is titrated with an 0.05 N KIO_3 solution. In order to determine Ti the sample is dissolved and Sn is distilled off in the form of $SnBr_4$. In the residue Sn is determined either gravimetrically or by titration of Ti^{3+} with $Fe(NH_4)(SO_4)_2$ solution in the presence of KSCN (after reduction of Ti^{4+} to Ti^{3+} by metallic Al). [Abstracter's note: Complete translation.]

AID Nr. 995-6 21 June

OXIDIMETRIC DETERMINATION OF Nb IN COMPLEX ZrC-NbC MIXTURES (USSR)

Kotlyar, Ye. Ye., and T. N. Nazarchuk. Zhurnal analiticheskoy khimii, v. 18, no. 4, Apr 1963, 474-479. S/075/63/018/004/009/015

On the basis of preliminary reduction tests of Nb with Al powder, Zn dust, Zn amalgam, metallic Cd, and in cadmium reducer at various acidities of the solution, a new method was established at the Institute of Powder Metallurgy and Special Alloys of the Ukrainian Academy of Sciences for the determination of Nb in NbC and in mixed carbides of the ZrC-NbC type. The method is based on the reduction of Nb in the dissolved sample to the required constant average oxidation number of 3.02 to 3.04 by means of metallic cadmium and a cadmium reducer in a mixture of sulfuric and hydrochloric acids. The reduced Nb is then oxidized to Nb(V) with a solution of iron ammonium alum, and the Nb content is calculated from the equivalent amount of bivalent iron formed, which is determined by titration with potassium bichromate with phenylanthranilic acid indicator. The results are in agreement with data obtained from the gravimetric cupferron method.

[EDW]

Card 1/1

L 09313-67 EWT(m)/EWP(t)/ETI IJP(c) WH/WW/JD/JG

ACC NR: AP6029829 (A) SOURCE CODE: UR/0363/66/002/008/1521/1523

AUTHOR: Kosolapova, T. Ya.; Fedorus, V. B.; Kuz'ma, Yu. B.; Kotlyar, Ye. Ye.

ORG: Institute of Materials Science Problems, Academy of Sciences, UkrSSR (Institut problem materialovedeniya Akademii nauk UkrSSR)

TITLE: Nature of the reaction of zirconium dioxide with titanium, niobium and chromium carbides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 8, 1966, 1521-1523

TOPIC TAGS: zirconium compound, titanium compound, niobium compound, chromium carbide, carbide

ABSTRACT: The reaction of ZrO_2 with TiC, NbC, or Cr_3C_2 was studied at 1000-2000°C at 10^{-2} mm Hg by means of phase chemical and x-ray analyses. The reaction in the ZrO_2-TiC system begins at 1300°C, and at 1900-2000°C results in the formation of a phase identified as a complex oxycarbide of the approximate composition $(Zr_{0,3}Ti_{0,7})(C_{0,56}O_{0,44})$ with lattice constant a = 4.43 Å. The reaction in the ZrO_2-NbC system begins at 1500°C. At about 1900-2000°C, a complex carbide of the type $(Nb_xZr_{1-x})C$ is formed in addition to a complex oxide of the type $(Nb_yZr_{1-y})O_2$. A chemical phase analysis based on the different solubilities of zirconium dioxide and niobium carbide in mixtures of H_2O_2 and citric acid was elaborated. The reaction of ZrO_2 with Cr_3C_2 results at 1300°C in the reduction of ZrO_2 to ZrC and in the formation of the lower

Card 1/2 UDC: 541.45+546.831-31

L 09313-67
ACC NR: AP6029829

chromium carbide Cr_7C_3. It is concluded that the difference in the nature of the reaction of ZrO_2 with carbides of group IV, V and VI metals is due to the difference in the electronic structure of the metal atoms forming the carbides. Authors thank G. V. Samsonov for useful remarks and suggestions during the course of this work. Orig. art. has: 3 tables.

SUB CODE: 07/11/ SUBM DATE: 11Oct65/ ORIG REF: 002

KOTLYAR, YULIAN MARKOVICH

GRISHIN, Grigoriy Yefimovich [deceased]; KOTLYAR, Yulian Markovich; PORTNOV, A.S., redaktor; TSIRUL'NITSKIY, N.P., tekhnicheskiy redaktor

[Preparation of secondary materials. Processing of secondary textile materials] Zagotovka vtorichnogo syr'ia. Obrabotka vtorichnogo tekstil'nogo syr'ia. Moskva, Vses. koop. izd-vo, 1956. 215 p. (MLRA 10:5)

(Textile industry)

KOTLYARCHUK, Pavel Antonovich; BYKOVSKIY, V., red.

[Workshop in a suitcase; "IUnyi tekhnik" universal machine] Masterskaia v chemodane; universal'nyi stanok "IUnyi tekhnik." Kalininskoe knizhnoe izd-vo, 1958. 29 p. (MIRA 12:2)

1. Slesar' Kalininskogo vagonostroitel'nogo zavoda (for Kotlyarchuk). (Woodworking machinery) (Metalworking machinery)

KOTLYARCHUK, P. Z.

33473. Patologicheskaya Anatomiya Na Pomoshuh' Prakticheskoy Meditsine. Sbornik Nauch. Rabot (Ryaz. Obl. Otd. Zdravookhraneniya), Vyp. 2, 1949, C. 101-06

SO: Letopis' Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

KOTLYARCHUK, P.Z., kandidat meditsinskikh nauk

Biopsy in the early diagnosis of uterine carcinoma. Sov. med. 18 no.7:27-28 Jl '54. (MLRA 7:8)

1. Iz Ryazanskoy oblastnoy klinicheskoy bol'nitsy imeni N.A.Semashko (glavnyy vrach-zasluzhennyy vrach RSFSR V.N.Shirokov) i kafedry patologicheskoy anatomii Ryazanskogo meditsinskogo instituta imeni akad. I.P.Pavlova (dir. Ye.N.Kovalev)

(UTERUS, neoplasms
*diag., early, by biopsy)
(BIOPSY
*diag. of uterine carcinoma, early)

KOTLYARCHUK, P.Z., kandidat meditsinskikh nauk.

Case histories of remote metastases of cancer of the lower lip. Vest.khir. 74 no.1:68-69 Ja-F '54. (MLRA 7:2)

1. Iz patologoanatomicheskogo otdeleniya (zaveduyushchiy - P.Z.Kotlyarchuk) Ryazanskoy oblastnoy klinicheskoy bol'nitsy im. N.A.Semashko.
(Lips--Cancer)

RODNYANSKIY, L.L.; KOTLYARCHUK, P.Z.

Internal injuries of the knee joint following direct application of force. Ortop., travm.i protez. 22 no.4:72 Ap '61. (MIRA 14:11)

(KNEE--WOUNDS AND INJURIES)

KOTLYARCHUK, P.Z. (Ryazan')

Unusual dystopia of renal tissue. Arkh.pat. no.1:81-83 '62.
(MIRA 15:1)

1. Iz patologoanatomicheskogo otdeleniya (zav. - kand.med.nauk P.Z. Kotlyarchuk) Ryazanskoy oblastnoy klinicheskoy bol'nitsy imeni N.A. Semashko (glavnyy vrach - zasluzhennyy vrach RSFSR B.N. Shirokov).
(KIDNEYS—ABNORMITIES AND DEFORMITIES)

KOTLYARENKO, A.

Radio v selakh Bukoviny. /Radio in the villages of Bukovina/. (Radio, Dec. 1949, no. 12, p. 20). DLC: TK540.R76

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

KOTLYARENKO, B.M.; GLUSKER, M.S. (Gomel')

Case of acromegaly with manifestations of virilism and diabetes insipidus for 32 years with preservation of the menstrual cycle for 38 years. Probl.endok.i gorm. 5 no.6:110-111 N-D '59.
(MIRA 13:5)

1. Iz Gomel'skogo oblastnogo protivozobnogo dispansera (glavnyy vrach B.M. Kotlyarenko).

(ACROMEGALY case reports)
(VIRILISM case reports)
(DIABETES INSIPIDUS case reports)
(MENSTRUATION)

KOTLYARENKO, B.M.; GLISKER, M.S.

Status of dispensary treatment of diabetes patients in Gomel Province. Zdrav.Belor. 5 no.7:11-12 Jl '59. (MIRA 12:9)

1. Iz Gomel'skogo oblastnogo endokrinologicheskogo dispansera (glavnyy vrach B.M.Kotlyarenko).
(GOMEL PROVINCE--DIABETES)

KOTLYARENKO, B.M.

Laurence-Moon-Biedl syndrome. Zdrav.Belor. 5 no.7:64-65 Jl '59. (MIRA 12:9)

1. Iz Gomel'skogo oblastnogo protivozobnogo dispansera.
(LAURENCE-MOON-BIEDL SYNDROME)

KOTLYARENKO, B.M.; GLUSKER, M.S.

Work of the polyclinical department of the Gomel' Province Goiter Prevention Dispensary in 1957-1958. Zdrav. Belor. 6 no. 10:30-32 O '60. (MIRA 13:10)

1. Iz Gomel'skogo oblastnogo protivozobnogo dispansera (glavnyy vrach B.M. Kotlyarenko).
(GOMEL' PROVINCE—GOITER)

KOTLYARENKO, B.M.; GLUSKER, M.S.

Hormone-producing tumor of the ovary in a 7-year-old girl.
Probl.endok.i gorm. 7 no.2:98-99 '61. (MIRA 14:5)
(OVARIES—TUMORS)

KOTLYARENKO, B.M., vrach; GLUSKER, M.S., vrach; TAMARKIN, I.D., vrach; KRASOVSKIY, V.A., vrach

Results of a house-to-house study of the population for goiter incidence. Zdrav. Bel. 7 no.9:63-64 S '61. (MIRA 14:10)

1. Iz Gomel'skogo oblastnogo protivozobnogo dispansera (for Kotlyarenko, Glusker, Tamarkin). 2. Respublikanskiy protivozobnyy dispanser, Belorussiya (for Krasovskiy).
(GOMEL' PROVINCE--GOITER)

KOTLYARENKO, B.M., vrach; GLUSKER, M.S., vrach; TAMARKIN, I.D., vrach; GRUDTSYN, A.V., vrach (Gomel')

Endemic goiter in Gomel' Province. Sov. zdrav. 21 no.9:45-47'62 (MIRA 17:4)

1. Iz Gomel'skogo oblastnogo protivozobnogo dispansera (glavnyy vrach - B.M.Kotlyarenko).

KOTLYARENKO, B.M.; KASIM, I.M.; LYUBIN, B.Z.

Morphological properties of goiter-induced changes in surgically removed thyroid glands as one of the objective indices of the severity of endemic goiter in Gomel' Province. Probl. endok. i gorm. 10 no.1:38-40 Ja-F '64.

(MIRA 17:10)

1. Gomel'skiy oblastnoy protivozobnyy dispanser, 1-ya Sovetskaya oblastnaya bol'nitsa i 4-ya Sovetskaya gorodskaya bol'nitsa Gomel'skoy oblasti.

IVASHKEVICH, G.A. (L'vov); CHERNAYA, L.A. (L'vov); KOTLYARENKO, B.N. (L'vov); KONONENKO, T.S. (L'vov)

Intracarotid administration of antitetanus serum in the treatment of tetanus. Klin.med. 40 no.10:73-77 O '62. (MIRA 15:12)

1. Iz kliniki infektsionnykh bolezney (zav. - dotsent B.N. Kotlyarenko) L'vovskogo meditsinskogo instituta i laboratorii ranevykh infektsiy (zav. - prof. L.A.Chernaya).
(TETANUS) (TETANUS ANTITOXIN)

BRANDENBURGSKIY, M.G.; KOTLYARENKO, I.Ya.; LEVERTOV, V.M.

Automatic control of industrial processes on hydraulic presses with respect to the function of time. Kuz.-shtam.proizv. 5 no.5:22-27 My '63. (MIRA 16:9)

KASSIS, V.; KOTLYARENKO, L.; KOSTINSKIY, D.N., red.

[India; an album of photographs] Indiia; fotoal'bom. Moskva, Mysl', 1964. 148 p. (MIRA 19:1)

RESHETOV, D.N.; KAMINSKAYA, V.V.; LEVINA, Z.M.; KOTLYARENKO, L.B.; MATVEYEVA, Ye.N., tekhnicheskiy redaktor; TIKHONOV, A.Ya., tekhnicheskiy redaktor

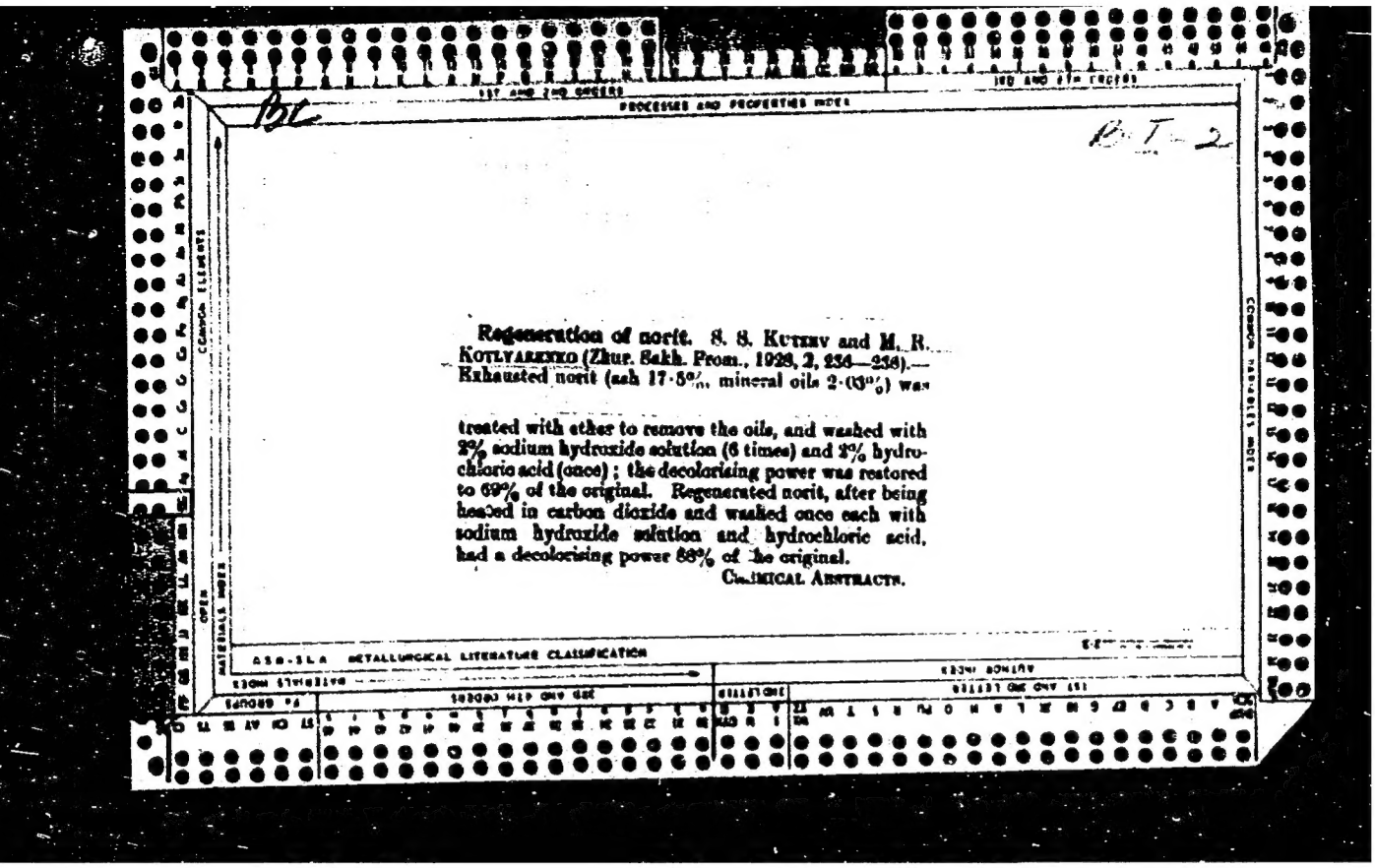
[Calculations used in the modernization of machines] Raschety pri modernizatsii stankov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 156 p. (MLRA 9:12)
(Mechanical engineering)

Preparing a design chart for dynamic calculations of gearboxes. Stan. i instr. 34 no.10:13-18 O '63. (MIRA 16:11)

CA KOTLYARENKO, M. G. 25

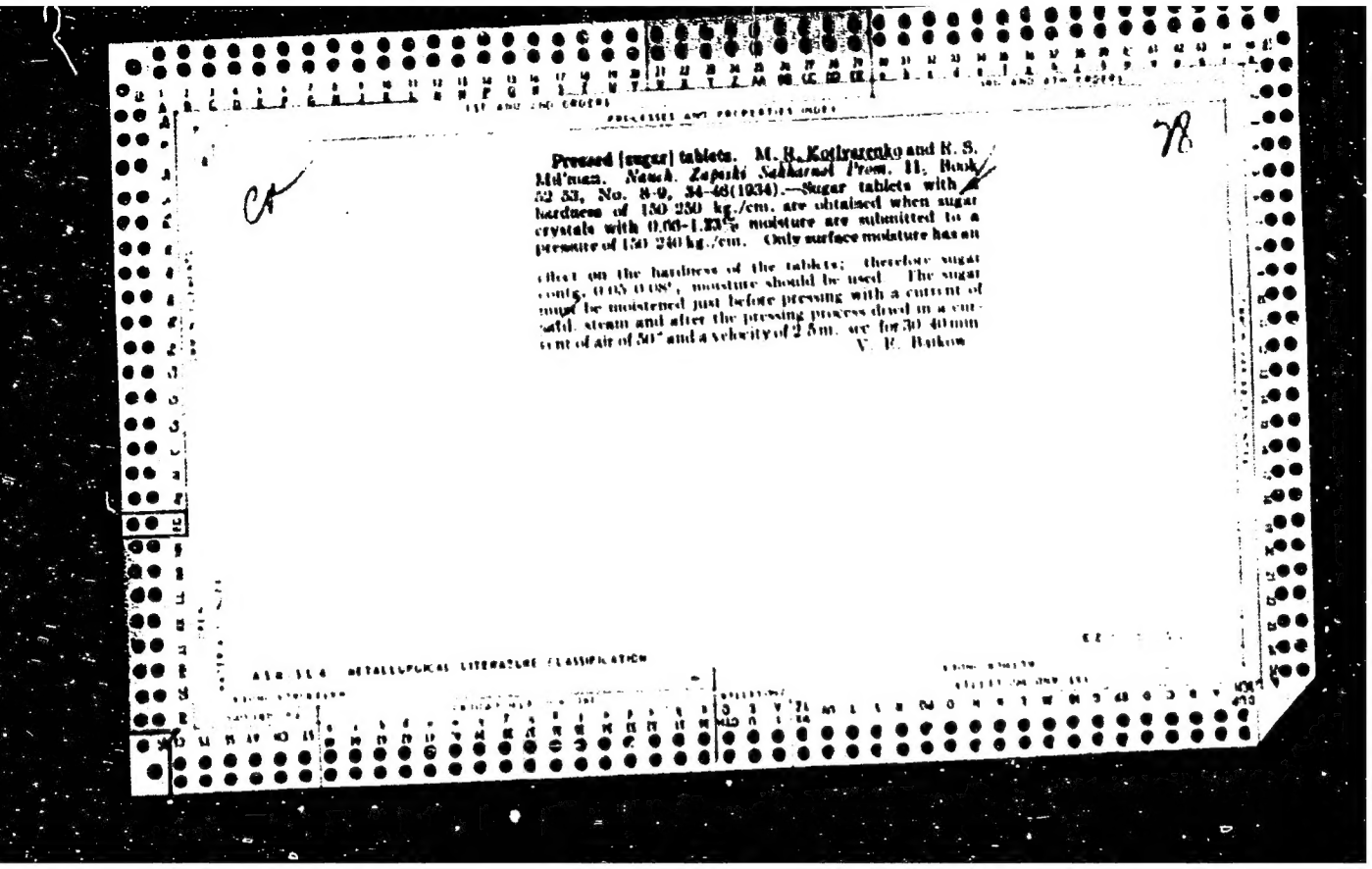
Observations on steam balance in sugar refineries. M. G. Kotlyarenko. *Sakharnaya Prom.* 24, No. 12, 22-3 (1950). V. E. Baikow

1951



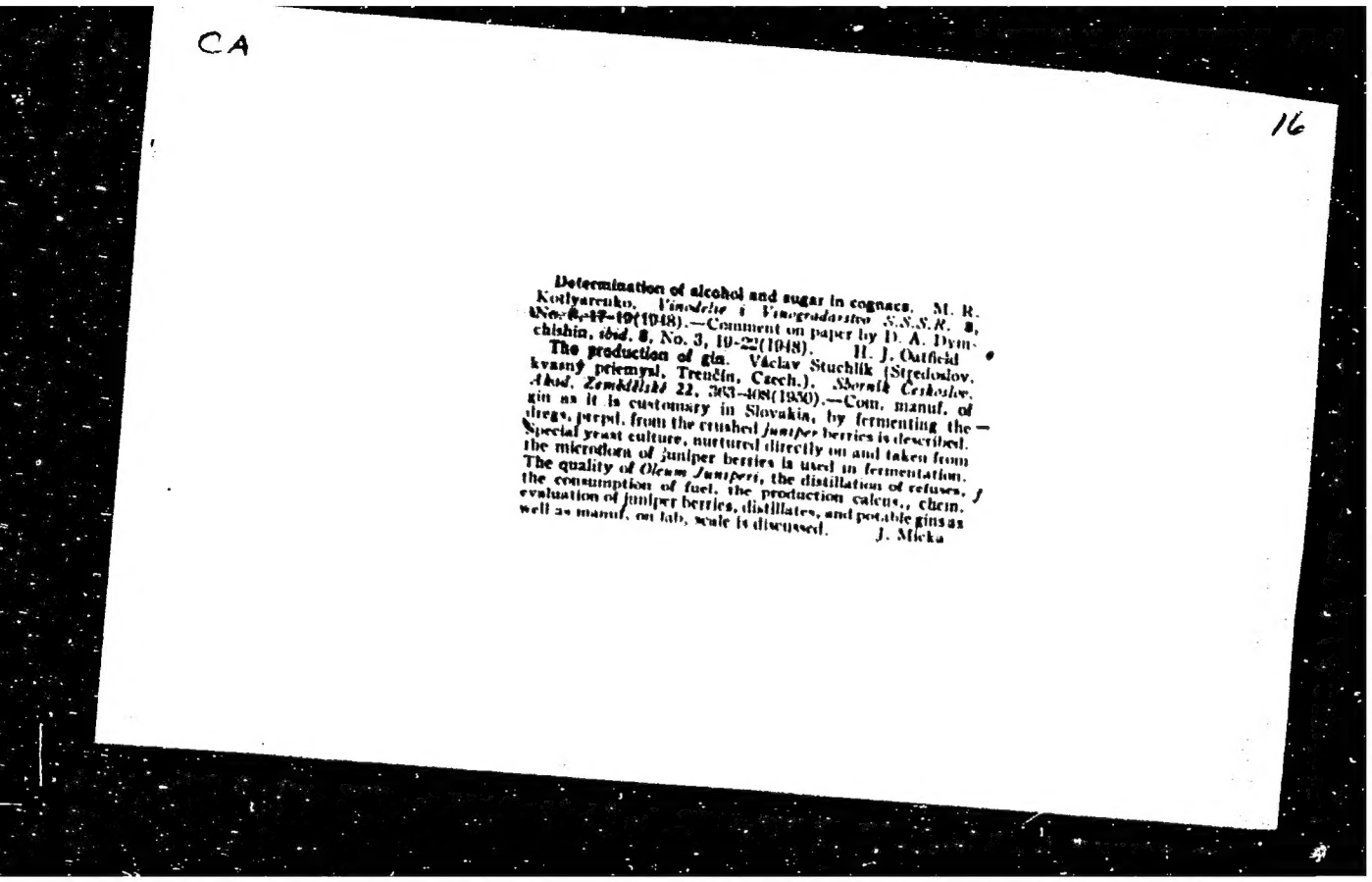
Regeneration of norit. S. S. KUTIEV and M. R. KOTLYARENKO (Zhur. Sakh. Prom., 1928, 2, 234—236).—Exhausted norit (ash 17·5%, mineral oils 2·03%) was treated with ether to remove the oils, and washed with 2% sodium hydroxide solution (6 times) and 2% hydrochloric acid (once); the decolorising power was restored to 69% of the original. Regenerated norit, after being heated in carbon dioxide and washed once each with sodium hydroxide solution and hydrochloric acid, had a decolorising power 68% of the original.

CHEMICAL ABSTRACTS.



Pressed [sugar] tablets. M. R. Kozlyarenko and K. S. Mil'man. *Nauch. Zapiski Sakharnoi Prom.* 11, Book 52-53, No. 8-9, 34-48(1934).—Sugar tablets with hardness of 150-250 kg./cm. are obtained when sugar crystals with 0.60-1.33% moisture are submitted to a pressure of 150-240 kg./cm. Only surface moisture has an effect on the hardness of the tablets; therefore sugar contg. 0.05-0.08% moisture should be used. The sugar must be moistened just before pressing with a current of satd. steam and after the pressing process dried in a current of air of 50° and a velocity of 2.5 m. sec. for 30-40 min.

V. P. Butkow



CA

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Determination of alcohol and sugar in cognacs. M. R. Kotlyarenko. *Vinodelie i Vinogradarstvo S.S.S.R.* **8**, No. 6-17-19(1948).—Comment on paper by D. A. Dymchishin, *ibid.* **8**, No. 3, 19-22(1948). H. J. Oatfield

The production of gin. Václav Stuchlík (Středoslov. kvasný průmysl, Trenčín, Czech.). *Sborník Českoslov. Akad. Zemědělské* **22**, 393–408(1950).—Com. manuf. of gin as it is customary in Slovakia, by fermenting the drugs, perpd. from the crushed *juniper* berries is described. Special yeast culture, nurtured directly on and taken from the microflora of juniper berries is used in fermentation. The quality of *Oleum Juniperi*, the distillation of refuses, the consumption of fuel, the production calcns., chem. evaluation of juniper berries, distillates, and potable gins as well as manuf. on lab. scale is discussed. J. Mleka